

What is claimed is:

1. An integrated circuit receiver available for infrared or ultrasonic transmission with digital filtering comprising:

an infrared receiver or ultrasonic transducer for receiving a transmitted signal from outside of said integrated circuit receiver and producing a carrier signal;

an amplifier connected to said infrared receiver or ultrasonic transducer for amplifying said carrier signal to be an amplified signal; and

a digital filter connected to said amplifier for filtering out a carrier component from said amplified signal to recover an original signal.

2. An integrated circuit receiver according to claim 1 wherein said digital filter comprising:

a fixed-interval reset circuit connected to said amplified signal for producing a fetched signal; and

a fixed-interval sample circuit connected to said fixed-interval reset circuit for demodulating said fetched signal.

3. An integrated circuit receiver according to claim 2 wherein said fixed-interval reset circuit and fixed-interval sample circuit are constructed with flip-flops.

4. An integrated circuit receiver according to claim 2 wherein said fixed-interval reset circuit and fixed-interval sample circuit are triggered on a rising edge and falling edge of a clock, respectively.